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LOGINID:SSPTAEGS1646

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

| | | | |
|--------------|-----------|--------|---|
| NEWS | 1 | | Web Page for STN Seminar Schedule - N. America |
| NEWS | 2 | DEC 01 | ChemPort single article sales feature unavailable |
| NEWS | 3 | APR 03 | CAS coverage of exemplified prophetic substances enhanced |
| NEWS | 4 | APR 07 | STN is raising the limits on saved answers |
| NEWS | 5 | APR 24 | CA/CAPLUS now has more comprehensive patent assignee information |
| NEWS | 6 | APR 26 | USPATFULL and USPAT2 enhanced with patent assignment/reassignment information |
| NEWS | 7 | APR 28 | CAS patent authority coverage expanded |
| NEWS | 8 | APR 28 | ENCOMPLIT/ENCOMPLIT2 search fields enhanced |
| NEWS | 9 | APR 28 | Limits doubled for structure searching in CAS REGISTRY |
| NEWS | 10 | MAY 08 | STN Express, Version 8.4, now available |
| NEWS | 11 | MAY 11 | STN on the Web enhanced |
| NEWS | 12 | MAY 11 | BEILSTEIN substance information now available on STN Easy |
| NEWS | 13 | MAY 14 | DGENE, PCTGEN and USGENE enhanced with increased limits for exact sequence match searches and introduction of free HIT display format |
| NEWS | 14 | MAY 15 | INPADOCDB and INPAFAMDB enhanced with Chinese legal status data |
| NEWS | 15 | MAY 28 | CAS databases on STN enhanced with NANO super role in records back to 1992 |
| NEWS | 16 | JUN 01 | CAS REGISTRY Source of Registration (SR) searching enhanced on STN |
| NEWS | 17 | JUN 26 | NUTRACEUT and PHARMAML no longer updated |
| NEWS | 18 | JUN 29 | IMSCOPROFILE now reloaded monthly |
| NEWS | 19 | JUN 29 | EPFULL adds Simultaneous Left and Right Truncation (SLART) to AB, MCLM, and TI fields |
| NEWS | 20 | JUL 09 | PATDPAFULL adds Simultaneous Left and Right Truncation (SLART) to AB, CLM, MCLM, and TI fields |
| NEWS EXPRESS | MAY 26 09 | | CURRENT WINDOWS VERSION IS V8.4, AND CURRENT DISCOVER FILE IS DATED 06 APRIL 2009. |

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NEWS LOGIN Welcome Banner and News Items

Enter NEWS followed by the item number or name to see news on that specific topic.

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products is prohibited and may result in loss of user privileges
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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 09:34:26 ON 14 JUL 2009

=> File .Gerry2MBCE
COST IN U.S. DOLLARS

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
| 0.22 | 0.22 |

FULL ESTIMATED COST

FILE 'MEDLINE' ENTERED AT 09:34:48 ON 14 JUL 2009

FILE 'BIOSIS' ENTERED AT 09:34:48 ON 14 JUL 2009

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FILE 'CAPLUS' ENTERED AT 09:34:48 ON 14 JUL 2009

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FILE 'EMBASE' ENTERED AT 09:34:48 ON 14 JUL 2009

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(FILE 'HOME' ENTERED AT 09:34:26 ON 14 JUL 2009)

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE' ENTERED AT 09:34:48 ON 14 JUL 2009

=> S ((Williams A/au) OR (Sereda T/au)) AND ((human growth factor) OR hGH)

L1 1 ((WILLIAMS A/AU) OR (SEREDA T/AU)) AND ((HUMAN GROWTH FACTOR)
OR HGH)

=> D Ibib abs L1

L1 ANSWER 1 OF 1 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
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ACCESSION NUMBER: 2001420775 EMBASE

TITLE: HIV patient acceptance of a needle-free device
(SeroJet®) for administering recombinant human growth
hormone in the treatment of HIV infection-associated
cachexia.

AUTHOR: Murray, F.T., Dr. (correspondence); Muurahainen, N.;
Gertner, J.M.; Williams, A.; Santos, G.;
Scheperle, M.; Richmond, G.; Finkelstein, J.; Nebiolo, L.;
Gaccione, P.

CORPORATE SOURCE: Serono Laboratories, Inc., 100 Longwater Circle, Norwell,
MA 02061, United States.

SOURCE: Today's Therapeutic Trends, (2001) Vol. 19, No. 4, pp.
283-295.

Refs: 20

ISSN: 0741-2320 CODEN: TTTRDH

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 027 Biophysics, Bioengineering and Medical
Instrumentation
037 Drug Literature Index
038 Adverse Reactions Titles
039 Pharmacy
006 Internal Medicine

LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20 Dec 2001
Last Updated on STN: 20 Dec 2001

AB A randomized, two-way crossover study of recombinant human growth hormone (somatropin; r-hGH [Serostim®]) 6 mg in 0.5 ml administered subcutaneously either by syringe or needle-free device (SeroJet®) injection was conducted in 78 HIV-positive adult male (65) and female (13) subjects with cachexia (wasting), to assess the acceptability of growth hormone administered using these two alternative methods of injection. In general, the study findings demonstrated similar results on the descriptive and comparative questionnaires for the needle with syringe and needle-free groups during the entire 14 days of growth hormone dosing. Descriptive questionnaires relating to hurt or pain, wetness, redness, and anxiety showed minimal responses in over 90% of patients, and in over 85% of patients with regard to stinging, with both the needle and syringe and needle-free administration. In addition, analysis of responses to comparative questions relating to ease of use, convenience, anxiety, pain and overall preference indicated no statistically significant differences between needle and needle-free administration. Male sex and a previous history of subcutaneous and intramuscular needle injections favored syringe with needle injection over needle-free administration, though not statistically significantly. In conclusion, needle-free administration of r-hGH with SeroJet® was well tolerated, as safe as conventional needle injection, and at least as acceptable to patients. The use of SeroJet® for Serostim® growth hormone administration may diminish the potential for accidental needlestick injury and/or transmission of blood-borne infection with no increase in adverse reactions, thus making this method of injection an advance for patients with communicable diseases who require treatment with injectable medications.

=> Log off H
SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 09:38:32 ON 14 JUL 2009

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTAEGS1646

PASSWORD:
* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
SESSION RESUMED IN FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE'
AT 09:42:32 ON 14 JUL 2009
FILE 'MEDLINE' ENTERED AT 09:42:32 ON 14 JUL 2009
FILE 'BIOSIS' ENTERED AT 09:42:32 ON 14 JUL 2009
Copyright (c) 2009 The Thomson Corporation
FILE 'CAPLUS' ENTERED AT 09:42:32 ON 14 JUL 2009
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| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
| FULL ESTIMATED COST | 24.11 | 24.33 |

=> S ((growth hormone) OR Somatotropin OR Somatropin OR GH) (S) (Formulation OR composition) (S) ((Polyethylene glycol) OR PEG)
L2 37 ((GROWTH HORMONE) OR SOMATOTROPIN OR SOMATROPIN OR GH) (S) (FORMULATION OR COMPOSITION) (S) ((POLYETHYLENE GLYCOL) OR PEG)

=> DUP Rem L2
PROCESSING COMPLETED FOR L2
L3 34 DUP REM L2 (3 DUPLICATES REMOVED)
ANSWER '1' FROM FILE MEDLINE
ANSWERS '2-34' FROM FILE CAPLUS

=> D Ti L3 1-34

L3 ANSWER 1 OF 34 MEDLINE on STN DUPLICATE 1
TI Controlled release of growth hormone from thermosensitive triblock copolymer systems: In vitro and in vivo evaluation.

L3 ANSWER 2 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
TI Pharmaceutical compositions containing human growth hormone

L3 ANSWER 3 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
TI Human growth hormone formulations

L3 ANSWER 4 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
TI Streptovercillium transglutaminase variants with improved specificity towards human growth hormone, and use for the preparation of pharmaceutical compositions

L3 ANSWER 5 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
TI Ceramic implant composition comprising bioactive glass particles in glycerol/polyethylene glycol carrier aqueous solution, for filling bone defects

L3 ANSWER 6 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
TI Sustained-release fine particle compositions and their manufacture

L3 ANSWER 7 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
TI Pharmaceutical compositions containing the conjugates of polyethylene glycol with oligopeptide and proteins

L3 ANSWER 8 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
TI Human growth hormone patch formulations

L3 ANSWER 9 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
TI Liquid formulation comprising human growth hormone whose deamidation and agglutination are minimized

L3 ANSWER 10 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
TI Stable growth hormone liquid formulation

L3 ANSWER 11 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
TI A pharmaceutical composition comprising a recombinant nonglycosylated immunoglobulin Fc region conjugated to a therapeutic protein as a drug carrier

L3 ANSWER 12 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
TI A pharmaceutical composition comprising aglycosylated IgG Fc fragment as a drug carrier, and method for the preparation thereof

L3 ANSWER 13 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
TI Long-acting modified proteins used in sustained release formulations for reduced clearance

L3 ANSWER 14 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Liquid human growth hormone formulation containing polyethylene glycol

L3 ANSWER 15 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Compositions and methods for enhanced mucosal delivery of growth hormone

L3 ANSWER 16 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Human growth hormone conjugated with biocompatible polymer

L3 ANSWER 17 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Composition for stabilized liquid formulation of human growth hormone which minimizes deamidation, polymer formation and oxidative dissociation of human growth hormone(hGH)

L3 ANSWER 18 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Novel Long-Acting Crystal Formulation of Human Growth Hormone

L3 ANSWER 19 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Methods and compositions for the preparation of human growth hormone (hCG) glycosylation mutants with reduced immunogenicity, and therapeutic uses thereof

L3 ANSWER 20 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Human growth hormone crystals and methods for preparing them

L3 ANSWER 21 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Biodegradable pharmaceutical composition enabling sustained release of human growth hormone and microsphere thereof

L3 ANSWER 22 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Sustained release formulations for growth hormone secretagogues

L3 ANSWER 23 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Optimization of the molecular properties and formulation of proteins delivered by inhalation by pegylation or glycosylation

L3 ANSWER 24 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI A somatotropin composition with improved syringeability

L3 ANSWER 25 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Sustained releasing composition comprising somatotropin

L3 ANSWER 26 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Wound healing compositions containing cell culture medium and growth hormones

L3 ANSWER 27 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Sustained-release protein formulations with PEG and triacetin

L3 ANSWER 28 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Implantable composition for the controlled release of somatotropin

L3 ANSWER 29 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Oral compositions of proteinaceous medicaments

L3 ANSWER 30 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Injection formulations containing therapeutic peptides and hormones

L3 ANSWER 31 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Improved high-impact, antistatic, rubber-modified styrene polymer

compositions

L3 ANSWER 32 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
TI Toilet-cleaning compositions containing polyethylene glycols and ethylene oxide-propylene oxide copolymers

L3 ANSWER 33 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
TI Water-based ink compositions for ball point pens

L3 ANSWER 34 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
TI Long-acting somatostatin composition

=> D ibib abs L3 1-34

L3 ANSWER 1 OF 34 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2008138257 MEDLINE
DOCUMENT NUMBER: PubMed ID: 18036752
TITLE: Controlled release of growth hormone from thermosensitive triblock copolymer systems: In vitro and in vivo evaluation.
AUTHOR: Chen Sibao; Singh Jagdish
CORPORATE SOURCE: Department of Pharmaceutical Sciences, College of Pharmacy, Nursing, and Allied Sciences, North Dakota State University, Fargo, ND 58105, USA.
CONTRACT NUMBER: HD4137 (United States NICHD NIH HHS)
SOURCE: International journal of pharmaceutics, (2008 Mar 20) Vol. 352, No. 1-2, pp. 58-65. Electronic Publication: 2007-10-22.
JOURNAL CODE: 7804127. ISSN: 0378-5173.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, N.I.H., EXTRAMURAL)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200807
ENTRY DATE: Entered STN: 27 Feb 2008
Last Updated on STN: 23 Jul 2008
Entered Medline: 22 Jul 2008
AB The purpose of this study was to design injectable controlled release polymer formulations for growth hormone using triblock copolymer PLGA-PEG-PLGA (MW 1400-1000-1400). Porcine growth hormone (pGH) formulations were prepared by adding pGH into 30% (w/v) aqueous solution of triblock copolymer. pGH concentrations in the released samples were determined using a standard MicroBCA method. In vitro release studies demonstrated that there were no initial burst of pGH from both formulations containing a low dose (0.12%, w/v) and a high dose (0.42%, w/v) of pGH. In vivo absorption study of pGH in rabbits showed that constant serum levels of exogenous pGH (3-7 ng/mL from high dose and 2-4 ng/mL from low dose) were detected for nearly 4 weeks from delivery systems upon single subcutaneous injection. The absolute bioavailability of pGH enhanced from the thermosensitive polymer-based systems, which was approximately 5-15-fold those of subcutaneous aqueous solution. MTT assay and light microscopy were used to investigate the in vitro and in vivo biocompatibility of thermosensitive polymer delivery systems, respectively. Both in vitro and in vivo results support the biocompatible nature of these polymer delivery systems. Thus, the triblock copolymer used in this study was able to control the release of incorporated pGH in vitro and in vivo for longer duration and the delivery system was biocompatible.

L3 ANSWER 2 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2008:1127506 CAPLUS
DOCUMENT NUMBER: 149:340028
TITLE: Pharmaceutical compositions containing human growth hormone
INVENTOR(S): Patel, Ashish Binpin; Azria, Moise; Li, Shoufeng
PATENT ASSIGNEE(S): Novartis A.-G., Switz.
SOURCE: PCT Int. Appl., 21pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|----------|-----------------|----------|
| WO 2008112836 | A2 | 20080918 | WO 2008-US56757 | 20080313 |
| WO 2008112836 | A3 | 20081204 | | |
| W: | AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | |
| RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA | | | |

PRIORITY APPLN. INFO.: US 2007-894961P P 20070315

AB The invention pertains to a suppository that enables the successful delivery of human growth hormone (hGH), to a subject via administration of the suppository and provides pharmaceutical compns. which are suppositories comprising a human growth hormone as the active ingredient together with the delivery agent 5-CNAC, where the pharmaceutical provides bioavailability, e.g. satisfactory or optimal rectal bioavailability for the human growth hormone active ingredient. Using a 96% PEG-1000, 4% PEG-4000, and a cocoa butter base, hGH was absorbed at therapeutic levels by using 5-CNAC in Rhesus monkeys.

L3 ANSWER 3 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2008:771340 CAPLUS
DOCUMENT NUMBER: 149:87638
TITLE: Human growth hormone formulations
INVENTOR(S): Chung, Wen-Li; Bush, Lawrence; Pechenov, Sergey; Basu, Sujit K.
PATENT ASSIGNEE(S): Altus Pharmaceuticals Inc., USA
SOURCE: PCT Int. Appl., 145pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|---|----------|-----------------|----------|
| WO 2008076819 | A2 | 20080626 | WO 2007-US87417 | 20071213 |
| WO 2008076819 | A3 | 20090326 | | |
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KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
 MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL,
 PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN,
 TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
 IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF,
 BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,
 GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
 BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

PRIORITY APPLN. INFO.: US 2006-870605P P 20061218

AB Formulations containing complexed human growth hormone crystals are described.
 Also described are needleless injection systems for crystalline proteins.
 Thus, a human growth hormone formulation
 comprised human growth hormone derivative crystals at 5-50
 mg/mL, phosphate buffer at pH of 6.1-6.8, sodium chloride or sodium
 acetate at 60-200 mM, 2.5-20% PEG, with the formulation
 being disposed in a siliconized prefilled syringe with no more than 10 mm
 head space; and a volume of 0.2-1.0 mL.

L3 ANSWER 4 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2008:223214 CAPLUS

DOCUMENT NUMBER: 148:278902

TITLE: Streptoverticillium transglutaminase variants with
 improved specificity towards human growth hormone, and
 use for the preparation of pharmaceutical compositions

INVENTOR(S): Hu, Zhixiang; Zhao, Xin; Wang, Jianhua; Chang,
 Chih-Chuan; Noerskov-Lauritsen, Leif

PATENT ASSIGNEE(S): Novo Nordisk Health Care A.-G., Switz.

SOURCE: PCT Int. Appl., 64pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 6

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2008020075 | A1 | 20080221 | WO 2007-EP58571 | 20070817 |
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| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| WO 2007020290 | A1 | 20070222 | WO 2006-EP65439 | 20060818 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | | |
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EP 2054436 A1 20090506 EP 2007-802683 20070817
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WO 2008102007 A1 20080828 WO 2008-EP52190 20080222
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WO 2008102008 A1 20080828 WO 2008-EP52194 20080222
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FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE,
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ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH,
PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU,
IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK,
TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: WO 2006-EP65439 A 20060818
EP 2007-102885 A 20070222
EP 2007-102886 A 20070222
EP 2005-107599 A 20050818
WO 2007-EP58571 W 20070817

AB Variants of transglutaminase from *Streptovorticillium ladakanum* and *S. mobaraense*, which variants have improved selectivity for Gln-141 of human growth hormone (hGH) are provided. The transglutaminase variants with improved selectivity are used for conjugating hGH at Gln-141. The conjugated hGH is used for the preparation of PEGylated hGH for the use in pharmaceutical compns. for treating hGH-associated diseases.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2008:1129938 CAPLUS

DOCUMENT NUMBER: 149:363068

TITLE: Ceramic implant composition comprising bioactive glass particles in glycerol/polyethylene glycol carrier aqueous solution, for filling bone defects

INVENTOR(S): Depaula, Carl Alexander

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 9pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

| | | | | |
|------------------------|----|----------|------------------|------------|
| US 20080226688 | A1 | 20080918 | US 2007-724255 | 20070315 |
| CA 2582551 | A1 | 20080915 | CA 2007-2582551 | 20070322 |
| CN 101264340 | A | 20080917 | CN 2007-10185030 | 20071106 |
| PRIORITY APPLN. INFO.: | | | US 2007-724255 | A 20070315 |

AB The invention is directed toward a sterile formable implant composition for application to a bone defect site comprising bioactive glass particles in an aqueous carrier solution, the bioactive glass particles being added to a viscous carrier at a concentration ranging from about 68% to about 76% (weight/weight),

the carrier comprising a mixture of glycerol and polyethylene glycol ranging from 24% to 32% (weight/weight) with the ratio of glycerol to polyethylene glycol ranging from about 45:55 to about 65:35. Thus, putty composition was formulated by mixing 6.5 g of bioactive glass particles (90 μ m to 710 μ m) (62 wt%) and 1.5 g of bioactive glass powder (32 μ m to 90 μ m) (14 wt%) with 2.4 g of carrier (24 wt%) made up of glycerol and PEG having a mol. weight of 2000 in a ratio of 60:40; the composition had a total glass percentage (76 wt%) forming a putty which was acceptable.

L3 ANSWER 6 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2008:548987 CAPLUS
DOCUMENT NUMBER: 148:546092
TITLE: Sustained-release fine particle compositions and their manufacture
INVENTOR(S): Nagao, Takeshi; Miyamoto, Yoko; Niimi, Jun
PATENT ASSIGNEE(S): Galeni Search Laboratories, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| JP 2008106024 | A | 20080508 | JP 2006-292936 | 20061027 |
| PRIORITY APPLN. INFO.: | | | JP 2006-292936 | 20061027 |

AB Title compns. comprise are manufactured by mixing aqueous solns. of water-soluble

divalent metal compds. with protein pharmaceuticals adsorbed into porous hydroxyapatite derivative fine particles at absorption rate 40-80%, freeze-drying, aqueous solns. or suspensions of hydrophilic biodegradable polymers, then freeze- or vacuum-drying. Thus, Zn-substituted hydroxyapatite was mixed with aqueous human growth hormone (hGH) and buffer solution, centrifuged, supernatant removed, mixed with aqueous ZnCl₂, freeze-dried, mixed with aqueous acetone solution of poly(lactic acid)-polyethylene glycol-poly(lactic acid) block copolymer, and freeze-dried to give fine powder composition, which released 5.2% hGH to phosphate buffer physiol. saline in 5 h.

L3 ANSWER 7 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

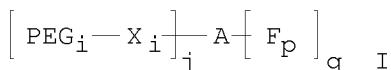
ACCESSION NUMBER: 2008:538036 CAPLUS
DOCUMENT NUMBER: 148:592937
TITLE: Pharmaceutical compositions containing the conjugates of polyethylene glycol with oligopeptide and proteins
INVENTOR(S): Zhao, Xuan; Gu, Qiang
PATENT ASSIGNEE(S): Beijing Jiankai Technology Co., Ltd., Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 23pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|----------|------------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| CN 101168594 | A | 20080430 | CN 2006-10150011 | 20061024 |
| WO 2008052428 | A1 | 20080508 | WO 2007-CN3030 | 20071024 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | |
| RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |

PRIORITY APPLN. INFO.:

CN 2006-10150011 A 20061024

GI



AB The title compound formed from polyethylene glycol and oligopeptide/protein can be expressed as formula I, (PEGi-Xi)j-A-(Fp)q, in which i = 1-j integer; j = >= 2 integer; and Xi can be the same or not connecting group; A comes from oligopeptide containing 2-20 amino acids, wherein at least two amino acids are different; and Fp is the active group selected from hydroxyl, acryl chloride, carboxyl, ester, acyl, hydrazide, maleimide, and pyridine disulfide; P is 1-q integer. The obtained compound can bond with proteins or polypeptides of macromol. or natural pharmaceutical active components via Fp to improve in-vivo physiol. function of pharmaceutical mols. or maintain pharmaceutical concentration and supply sustained-release function.

L3 ANSWER 8 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:538922 CAPLUS

DOCUMENT NUMBER: 146:487803

TITLE: Human growth hormone patch formulations

INVENTOR(S): Sacks, Hagit; Stern, Meir

PATENT ASSIGNEE(S): Teva Pharmaceutical Industries Ltd., Israel; Teva Pharmaceuticals Usa, Inc.; Transpharma Medical Ltd.

SOURCE: PCT Int. Appl., 22pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|---|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| WO 2007056105 | A2 | 20070518 | WO 2006-US42894 | 20061102 |
| WO 2007056105 | A3 | 20070705 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, | | | |

RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT,
 TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
 IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
 GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

CA 2634181 A1 20070518 CA 2006-2634181 20061102
 US 20070141132 A1 20070621 US 2006-592791 20061102
 EP 1948221 A2 20080730 EP 2006-836849 20061102

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
 IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR

JP 2009514869 T 20090409 JP 2008-539045 20061102
 US 20080226703 A1 20080918 US 2008-92239 20080430

PRIORITY APPLN. INFO.: US 2005-733005P P 20051102
 US 2005-739288P P 20051122
 WO 2006-US42894 W 20061102

AB The invention encompasses a transdermal patch formulation comprising hGH,
 at least one sugar, one amino acid or polyol, and a buffer, wherein the
 buffer maintains the pH of the formulation in the range of 5 to 9 and the
 formulation does not contain both glycine and mannitol. For example, a
 transdermal patch formulation contained hGH, sucrose, and glycine in a
 phosphate buffer, wherein the concentration ratio of hGH, sucrose, and glycine
 is
 0.85:0.8:0.26 to 0.85:1.20:0.40.

L3 ANSWER 9 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:703724 CAPLUS

DOCUMENT NUMBER: 147:150948

TITLE: Liquid formulation comprising human growth hormone
 whose deamidation and agglutination are minimized

INVENTOR(S): Kim, Sun Hee; Chung, Yo Kyung; Chang, Jae Young; Lee,
 Sang Kil; Lee, Min Suk; Park, Seung Kook; Lee, Bong
 Yong

PATENT ASSIGNEE(S): Daewoong Co., Ltd., S. Korea

SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given
 CODEN: KRXXA7

DOCUMENT TYPE: Patent

LANGUAGE: Korean

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|--|----------|-----------------|----------|
| KR 2006124449 | A | 20061205 | KR 2005-46381 | 20050531 |
| KR 769709 | B1 | 20071023 | | |
| WO 2008004717 | A1 | 20080110 | WO 2006-KR2640 | 20060706 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | |
| RW: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | |
| EP 2049148 | A1 | 20090422 | EP 2006-769186 | 20060706 |
| R: | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, | | | |

BA, HR, MK, RS
PRIORITY APPLN. INFO.:

KR 2005-46381 T0 20050531
WO 2006-KR2640 W 20060706

AB A liquid formulation containing human growth hormone is provided to enhance storage stability by minimizing deamidation and agglutination of human growth hormone. The liquid formulation contains: human growth hormone; L-lysine or L-arginine; and poly(oxyethylene) poly(oxypropylene) copolymer, polyethyleneglycol-15 polyoxystearate or polyethyleneglycol-35 castor oil, wherein the amount of human growth hormone is 2.5-5.5 mg/mL, the amount of L-lysine or L-arginine is 0.02-0.5 w/v% per 1 mg of human growth hormone, and the amount of poly(oxyethylene) poly(oxypropylene) copolymer, polyethyleneglycol-15 polyoxystearate or polyethyleneglycol-35 castor oil is 0.1-0.5 w/v%; and the liquid formulation further contains at least one component selected from buffer solution, tonicity adjustment agent, preservative and analgesia.

L3 ANSWER 10 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:612122 CAPLUS
DOCUMENT NUMBER: 143:120561
TITLE: Stable growth hormone liquid formulation
INVENTOR(S): Badkar, Advait; Nema, Sandeep; Wadhwa, Manpreet
PATENT ASSIGNEE(S): Pharmacia Corporation, USA
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2005063298 | A1 | 20050714 | WO 2004-IB4159 | 20041213 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2551510 | A1 | 20050714 | CA 2004-2551510 | 20041213 |
| EP 1706150 | A1 | 20061004 | EP 2004-801396 | 20041213 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS | | | | |
| BR 2004018115 | A | 20070417 | BR 2004-18115 | 20041213 |
| JP 2007516274 | T | 20070621 | JP 2006-546366 | 20041213 |
| MX 2006006535 | A | 20060731 | MX 2006-6535 | 20060608 |
| US 20080125356 | A1 | 20080529 | US 2007-583923 | 20070514 |
| PRIORITY APPLN. INFO.: | | | US 2003-531843P | P 20031223 |
| | | | WO 2004-IB4159 | W 20041213 |

AB The present invention is directed to stable liquid growth hormone formulations that remain stable after phys. agitation, and after exposure to one or more freeze-thaw events. Formulations of the present invention can be stored long term at a variety of temps., even frozen. In the present invention, a combination of buffer and stabilizing agents, including a non-ionic surfactant (e.g., polysorbate 20), a polymer stabilizer (e.g., polyethylene glycol), and other optional stabilizers combine to provide unexpected stability to aqueous formulations of a growth hormone (e.g., human

growth hormone).

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 11 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:451425 CAPLUS

DOCUMENT NUMBER: 143:13190

TITLE: A pharmaceutical composition comprising a recombinant nonglycosylated immunoglobulin Fc region conjugated to a therapeutic protein as a drug carrier

INVENTOR(S): Kim, Young Min; Song, Dae Hae; Jung, Sung Youb; Kim, Chang Hwan; Choi, In Young; Kwon, Se Chang; Lee, Gwan Sun

PATENT ASSIGNEE(S): Hanmi Pharm. Ind. Co., Ltd., S. Korea

SOURCE: PCT Int. Appl., 116 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 7

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|------------------|-------------|
| WO 2005047337 | A1 | 20050526 | WO 2004-KR2945 | 20041113 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| RW: | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| KR 2005047030 | A | 20050519 | KR 2004-92780 | 20041113 |
| KR 2005047031 | A | 20050519 | KR 2004-92781 | 20041113 |
| KR 775343 | B1 | 20071108 | | |
| KR 2005047032 | A | 20050519 | KR 2004-92782 | 20041113 |
| KR 2005047033 | A | 20050519 | KR 2004-92783 | 20041113 |
| CA 2512933 | A1 | 20050526 | CA 2004-2512933 | 20041113 |
| AU 2004282985 | A1 | 20050630 | AU 2004-282985 | 20041113 |
| AU 2004282985 | B2 | 20080814 | | |
| AU 2004282984 | A1 | 20050714 | AU 2004-282984 | 20041113 |
| BR 2004006606 | A | 20051206 | BR 2004-6606 | 20041113 |
| CN 1723219 | A | 20060118 | CN 2004-80001770 | 20041113 |
| CN 1723220 | A | 20060118 | CN 2004-80001775 | 20041113 |
| EP 1682584 | A1 | 20060726 | EP 2004-800092 | 20041113 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS | | | |
| JP 2007537992 | T | 20071227 | JP 2006-539399 | 20041113 |
| RU 2352583 | C2 | 20090420 | RU 2005-120239 | 20041113 |
| IN 2005DN02857 | A | 20070525 | IN 2005-DN2857 | 20050627 |
| MX 2005007211 | A | 20060210 | MX 2005-7211 | 20050630 |
| KR 2006054252 | A | 20060522 | KR 2006-36697 | 20060424 |
| US 20060275254 | A1 | 20061207 | US 2006-535231 | 20060724 |
| PRIORITY APPLN. INFO.: | | | KR 2003-80299 | A 20031113 |
| | | | KR 2004-92780 | A3 20041113 |
| | | | WO 2004-KR2945 | W 20041113 |

AB Disclosed is a novel use of an Ig Fc fragment, and more particularly, a pharmaceutical composition comprising an Ig Fc fragment as a carrier. Most preferable Ig Fc fragment is a human IgG4-derived nonglycosylated Fc

fragment produced by a prokaryote, preferably E. coli. Also demonstrated are preparation and pharmacokinetic anal. of α interferon (hIFN α -2b), human growth hormone, EPO, G-CSF and Fab' conjugated to various forms of Fc fragments through 3.4 kDa PEG. The pharmaceutical composition comprising an Ig Fc fragment as a carrier remarkably extends the serum half-life of a drug while maintaining the in vivo activity of the drug at relatively high levels. Also, when the drug is a polypeptide drug, the pharmaceutical composition has less risk of inducing immune responses compared to a fusion protein of the Ig Fc fragment and a target protein, and is thus useful for developing long-acting formulations of various polypeptide drugs.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 12 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:451422 CAPLUS

DOCUMENT NUMBER: 143:13189

TITLE: A pharmaceutical composition comprising aglycosylated IgG Fc fragment as a drug carrier, and method for the preparation thereof

INVENTOR(S): Jung, Sung Youb; Kim, Jin Sun; Yang, Geun Hee; Kwon, Se Chang; Lee, Gwan Sun

PATENT ASSIGNEE(S): Hanmi Pharm. Ind. Co., Ltd., S. Korea

SOURCE: PCT Int. Appl., 131 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 7

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|-------------|
| WO 2005047334 | A1 | 20050526 | WO 2004-KR2942 | 20041113 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| KR 2005047030 | A | 20050519 | KR 2004-92780 | 20041113 |
| KR 2005047031 | A | 20050519 | KR 2004-92781 | 20041113 |
| KR 775343 | B1 | 20071108 | | |
| KR 2005047032 | A | 20050519 | KR 2004-92782 | 20041113 |
| KR 2005047033 | A | 20050519 | KR 2004-92783 | 20041113 |
| AU 2004282984 | A1 | 20050714 | AU 2004-282984 | 20041113 |
| CN 1723219 | A | 20060118 | CN 2004-80001770 | 20041113 |
| CN 1723220 | A | 20060118 | CN 2004-80001775 | 20041113 |
| EP 1682581 | A1 | 20060726 | EP 2004-800089 | 20041113 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS | | | | |
| JP 2007531513 | T | 20071108 | JP 2006-539396 | 20041113 |
| KR 2006054252 | A | 20060522 | KR 2006-36697 | 20060424 |
| US 20070041967 | A1 | 20070222 | US 2006-535341 | 20060609 |
| PRIORITY APPLN. INFO.: | | | KR 2003-80299 | A 20031113 |
| | | | KR 2004-92780 | A3 20041113 |
| | | | WO 2004-KR2942 | W 20041113 |
| AB Disclosed is an IgG Fc fragment useful as a drug carrier. Also, the | | | | |

present invention discloses a recombinant vector expressing the IgG Fc fragment, a transformant transformed with the recombinant vector, and a method of preparing an IgG Fc fragment, comprising culturing the transformant. Preferably aglycosylated IgG2 Fc and IgG4 Fc fragments are used. Provided are sequences for IgG Fc fragments and Fc fragments-encoding genes. When conjugated to a certain drug, the IgG Fc fragment improves the in vivo duration of action of the drug and minimizes the in vivo activity reduction of the drug. Demonstrated is preparation of

GH-

G-CSF-PEG-Fc conjugates and INF α -PEG-deglycosylated Fc conjugates. Also demonstrated are changes in pharmacokinetics, cytotoxicity and activity of α interferon, human growth hormone and G-CSF.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 13 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:346886 CAPLUS

DOCUMENT NUMBER: 142:379425

TITLE: Long-acting modified proteins used in sustained release formulations for reduced clearance

INVENTOR(S): Jensen, Simon Bjerregaard; Iversen, Lars Fogh; Rischel, Christian; Reslow, Mats

PATENT ASSIGNEE(S): Novo Nordisk A/S, Den.

SOURCE: PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|-----------------|------------|
| WO 2005034988 | A1 | 20050421 | WO 2004-DK684 | 20041008 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VZ, VC, VN, YU, ZA, ZM, ZW | | | |
| RW: | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| EP 1677819 | A1 | 20060712 | EP 2004-762903 | 20041008 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK | | | |
| JP 2007508250 | T | 20070405 | JP 2006-529652 | 20041008 |
| US 20060257479 | A1 | 20061116 | US 2006-395770 | 20060331 |
| PRIORITY APPLN. INFO.: | | | DK 2003-1496 | A 20031010 |
| | | | US 2003-510892P | P 20031014 |
| | | | WO 2004-DK684 | W 20041008 |

AB Sustained release formulations comprising mols. modified so as to have a reduced clearance are provided. For example, human growth hormone conjugated with PEG used in sustained formulations containing hydrophobic polymers, such as PEG, and PGLA.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 14 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:283354 CAPLUS

DOCUMENT NUMBER: 142:322803
 TITLE: Liquid human growth hormone
 formulation containing polyethylene
 glycol
 INVENTOR(S): Williams, Ashley Martin; Sereda, Terrance Jimmy;
 Wiebe, Deanna June
 PATENT ASSIGNEE(S): Cangene Corporation, Can.
 SOURCE: PCT Int. Appl., 30 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|------------|
| WO 2005027960 | A1 | 20050331 | WO 2004-CA1698 | 20040927 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2540172 | A1 | 20050331 | CA 2004-2540172 | 20040927 |
| EP 1663296 | A1 | 20060607 | EP 2004-761854 | 20040927 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK | | | | |
| JP 2007506683 | T | 20070322 | JP 2006-527240 | 20040927 |
| US 20090029911 | A1 | 20090129 | US 2007-573571 | 20070322 |
| PRIORITY APPLN. INFO.: | | | US 2003-505432P | P 20030925 |
| | | | WO 2004-CA1698 | W 20040927 |

AB A stable pharmaceutically acceptable aqueous formulation contains human growth hormone, a buffer, polyethylene glycol, a tonicifier such as a sugar alc., and optionally, an antimicrobial agent and optionally, a chelating agent. Also disclosed are associated means and methods for preparing, storing and using such formulations. thus, a formulation containing PEG, buffer, tonicifying agent, protected the hGH against both phys. and chemical degradation during long-term storage.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 15 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:55083 CAPLUS
 DOCUMENT NUMBER: 142:141264
 TITLE: Compositions and methods for enhanced mucosal delivery
 of growth hormone
 INVENTOR(S): Quay, Steven C.; De Meireles, Jorge C.; Gupta, Malini;
 Vangala, Shyam
 PATENT ASSIGNEE(S): Nastech Pharmaceutical Company Inc., USA
 SOURCE: PCT Int. Appl., 108 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|---|----------|-----------------|------------|
| ----- | ---- | ----- | ----- | ----- |
| WO 2005004895 | A2 | 20050120 | WO 2004-US17632 | 20040601 |
| WO 2005004895 | A3 | 20050915 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, | | | |
| RW: | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| CA 2528465 | A1 | 20050120 | CA 2004-2528465 | 20040601 |
| US 20050031549 | A1 | 20050210 | US 2004-862141 | 20040601 |
| EP 1643970 | A2 | 20060412 | EP 2004-754279 | 20040601 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR | | | |
| JP 2007500243 | T | 20070111 | JP 2006-533559 | 20040601 |
| MX 2005013340 | A | 20060309 | MX 2005-13340 | 20051208 |
| PRIORITY APPLN. INFO.: | | | US 2003-477403P | P 20030609 |
| | | | WO 2004-US17632 | W 20040601 |

AB Pharmaceutical formulations are described comprising at least one growth hormone and one or more intranasal delivery-enhancing agents for enhanced nasal mucosal delivery of the growth hormone. In one aspect, the intranasal delivery formulations and methods provide enhanced delivery of growth hormone to the blood plasma, for example, by yielding a peak concentration (Cmax) of the growth hormone in an hepatic portal vein or a blood plasma of the subject that is 20% or greater compared to a peak concentration of the growth hormone in the hepatic portal vein or the blood plasma of the subject following administration to the subject of a same concentration or dose of the growth hormone to the subject by s.c. injection. Exemplary formulations and methods within the invention utilize human growth hormone as the hormone. A composition contained growth hormone, sucrose, phosphate, arginine-HCl, di-Na EDTA, and water.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 16 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2005:1334140 CAPLUS
 DOCUMENT NUMBER: 144:74823
 TITLE: Human growth hormone conjugated with biocompatible polymer
 INVENTOR(S): Park, Myung-Ok; Jacobs, John W.
 PATENT ASSIGNEE(S): Phage Biotechnology Corporation, USA
 SOURCE: U.S. Pat. Appl. Publ., 48 pp., Cont.-in-part of U.S. Ser. No. 947,513.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|---|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| US 20050281778 | A1 | 20051222 | US 2005-187522 | 20050722 |
| KR 2004086521 | A | 20041011 | KR 2004-7983 | 20040206 |
| WO 2004084948 | A1 | 20041007 | WO 2004-KR701 | 20040327 |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, | | | |

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK,
 LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO,
 NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
 TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
 ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
 SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,
 TD, TG
 US 20050059129 A1 20050317 US 2004-947513 20040922
 US 20060134736 A1 20060622 US 2005-314926 20051220
 AU 2005335186 A1 20070215 AU 2005-335186 20051220
 CA 2616187 A1 20070215 CA 2005-2616187 20051220
 WO 2007018583 A2 20070215 WO 2005-US46791 20051220
 WO 2007018583 A3 20070531
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
 KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
 MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
 SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
 VN, YU, ZA, ZM, ZW
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
 IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
 GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
 EP 1915179 A2 20080430 EP 2005-855362 20051220
 R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
 IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
 JP 2009502779 T 20090129 JP 2008-522759 20051220
 KR 2008041661 A 20080513 KR 2008-704205 20080221
 PRIORITY APPLN. INFO.: KR 2003-19734 A 20030328
 KR 2004-7983 A 20040206
 WO 2004-KR701 A2 20040327
 US 2004-947513 A2 20040922
 US 2005-187522 A2 20050722
 WO 2005-US46791 W 20051220

AB The present invention relates to conjugates of biocompatible polymers and
 biol. active proteins, such as human growth hormone
 (hGH), particularly PEG-hGH, where the activated biocompatible
 polymer is conjugated to a carboxyl group of hGH at a molar ratio of 1:1,
 methods of preparation, and related pharmaceutical compns. The
 PEG-hGH conjugates have up to 20% of the activity of the native hGH while
 the in vivo half life is increased 10 fold. The PEG-hGH conjugates may be
 used therapeutically to treat growth retardation or growth failure, especially
 short stature in children, and conditions related to aging. Thus, the
 PEG-hGH conjugate was prepared by reacting hGH with PEG derivs. activated
 with EDAC. The reaction was carried out for 1 h at 25° using
 either PEG 20,000 or PEG 30,000. MonoPEG-hGH and diPEG-hGH were obtained
 and purified by HPLC using a size-exclusion column. Mono- and diPEG-hGH
 retained 15±5% and 8±2% of biol. activity, resp., as compared to
 native hGH. However, the PEG-hGH was cleared much slower than native hGH
 in rats. Thus, the PEG-hGH samples of this study can provide a new
 sustained released drug of hGH.

L3 ANSWER 17 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2006:877511 CAPLUS

DOCUMENT NUMBER: 145:278290

TITLE: Composition for stabilized liquid formulation of human
 growth hormone which minimizes deamidation, polymer

formation and oxidative dissociation of human growth hormone(hGH)
 INVENTOR(S): Jung, Sung Youb; Kim, Young Min; Kwon, Se Chang; Lee, Gwan Sun; Yang, Geun Hee
 PATENT ASSIGNEE(S): Hanmi Pharm. Ind. Co., Ltd., S. Korea
 SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given
 CODEN: KRXXA7
 DOCUMENT TYPE: Patent
 LANGUAGE: Korean
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| KR 2005023875 | A | 20050310 | KR 2003-61434 | 20030903 |
| PRIORITY APPLN. INFO.: | | | KR 2003-61434 | 20030903 |

AB A composition for stabilized liquid formulation of human growth hormone is provided which minimizes deamidation, polymer formation and oxidative dissociation of human growth hormone(hGH). The stability of the liquid formulation was improved. The composition for stabilized liquid formulation of human growth hormone comprises 1 to 10 mg/mL human growth hormone(hGH), 5 to 100 mM buffering agent, 0.001 to 20 mg/mL polyethylene glycol and 5 to 100 mg/mL tonicity adjustment agent, wherein the human growth hormone is recombinant methionyl human growth hormone or recombinant natural human growth hormone; the buffering agent is sodium citrate; the tonicity adjustment agent comprises sodium chloride, mannitol and a mixture thereof; and the composition has pH 5.5 to 6.5.

L3 ANSWER 18 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:901684 CAPLUS
 DOCUMENT NUMBER: 144:27270
 TITLE: Novel Long-Acting Crystal Formulation of Human Growth Hormone
 AUTHOR(S): Govardhan, Chandrika; Khalaf, Nazer; Jung, Chu W.; Simeone, Ben; Higbie, Amy; Qu, Susan; Chemmalil, Letha; Pechenov, Sergey; Basu, Sujit K.; Margolin, Alexey L.
 CORPORATE SOURCE: Altus Pharmaceuticals Inc., Cambridge, MA, 02139, USA
 SOURCE: Pharmaceutical Research (2005), 22(9), 1461-1470
 CODEN: PHREEB; ISSN: 0724-8741
 PUBLISHER: Springer Science+Business Media, Inc.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The aim of the study is to solve a significant challenge of extending the half-life of therapeutic proteins using crystalline biopharmaceuticals and without redesigning the mols. Crystals of recombinant human growth hormone were coated with a monomol. layer of pos. charged poly(arginine). The pharmacokinetics and pharmacodynamics of this poly(arginine)-coated human growth hormone crystalline formulation were determined in hypophysectomized rats and monkeys. Here the authors have demonstrated for the first time that crystals of human growth hormone coated with pos. charged poly(arginine) allowed for in vivo pharmacokinetic release profiles of over several days in animal models. The efficacy of this crystalline formulation injected s.c. once a week was found to be equivalent to 7 daily soluble injections in the standard weight gain assay using the hypophysectomized rat model and in measurement of serum insulin-like growth factor in monkeys. The nonviscous nature of the suspension facilitated easy administration through a fine, 30-gauge needle and should provide for improved patient

convenience and compliance. The approach described here offers an exciting possibility of being broadly applicable to other therapeutic proteins.

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 19 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:1033550 CAPLUS

DOCUMENT NUMBER: 142:33306

TITLE: Methods and compositions for the preparation of human growth hormone (hCG) glycosylation mutants with reduced immunogenicity, and therapeutic uses thereof

INVENTOR(S): Clausen, Henrik

PATENT ASSIGNEE(S): Neose Technologies, Inc., USA; Defrees, Shawn

SOURCE: PCT Int. Appl., 136 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|------------------|------------|
| WO 2004103275 | A2 | 20041202 | WO 2004-US14254 | 20040507 |
| WO 2004103275 | A3 | 20070518 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| RW: | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, AP, EA, EP, OA | | | |
| AU 2004240553 | A1 | 20041202 | AU 2004-240553 | 20040507 |
| CA 2524936 | A1 | 20041202 | CA 2004-2524936 | 20040507 |
| EP 1624847 | A2 | 20060215 | EP 2004-751591 | 20040507 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR | | | |
| BR 2004010164 | A | 20060516 | BR 2004-10164 | 20040507 |
| JP 2007523630 | T | 20070823 | JP 2006-532844 | 20040507 |
| CN 101080238 | A | 20071128 | CN 2004-80016847 | 20040507 |
| ZA 2005009864 | A | 20080227 | ZA 2005-9864 | 20040507 |
| MX 2005011832 | A | 20060217 | MX 2005-11832 | 20051103 |
| KR 2006030023 | A | 20060407 | KR 2005-721304 | 20051109 |
| IN 2005KN02351 | A | 20060825 | IN 2005-KN2351 | 20051123 |
| US 20080102083 | A1 | 20080501 | US 2007-556094 | 20070416 |
| PRIORITY APPLN. INFO.: | | | US 2003-469114P | P 20030509 |
| | | | US 2003-494751P | P 20030813 |
| | | | US 2003-495076P | P 20030814 |
| | | | US 2004-535290P | P 20040108 |
| | | | WO 2004-US14254 | W 20040507 |

AB The present invention relates to mutants of human growth hormone, which contain newly introduced N-linked or O-linked glycosylation site(s), such that these recombinantly produced polypeptides have glycosylation patterns distinctly different from that of the naturally occurring human growth hormone. The polynucleotide coding sequences for the mutants, expression cassettes comprising the coding sequences, cells expressing the mutants, and methods for producing the mutants are also disclosed. Further disclosed are pharmaceutical compns. comprising the mutants and method for

using the mutants.

L3 ANSWER 20 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:589380 CAPLUS

DOCUMENT NUMBER: 141:128854

TITLE: Human growth hormone crystals and methods for preparing them

INVENTOR(S): Govardhan, Chandrika; Khalaf, Nazer; Simeone, Benjamin Paul

PATENT ASSIGNEE(S): Altus Biologics Inc., USA

SOURCE: PCT Int. Appl., 115 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|------------------|-------------|
| WO 2004060310 | A2 | 20040722 | WO 2003-US41545 | 20031231 |
| WO 2004060310 | A3 | 20041209 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | |
| RW: | BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| CA 2512052 | A1 | 20040722 | CA 2003-2512052 | 20031231 |
| AU 2003303646 | A1 | 20040729 | AU 2003-303646 | 20031231 |
| US 20040209804 | A1 | 20041021 | US 2003-749962 | 20031231 |
| EP 1581251 | A2 | 20051005 | EP 2003-808602 | 20031231 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | |
| BR 2003017888 | A | 20051206 | BR 2003-17888 | 20031231 |
| CN 1744914 | A | 20060308 | CN 2003-80109408 | 20031231 |
| JP 2006512416 | T | 20060413 | JP 2005-508635 | 20031231 |
| ZA 2005005305 | A | 20070725 | ZA 2005-5305 | 20031231 |
| RU 2357750 | C2 | 20090610 | RU 2005-124280 | 20031231 |
| IN 2005KN01264 | A | 20070309 | IN 2005-KN1264 | 20050629 |
| MX 2005007181 | A | 20060407 | MX 2005-7181 | 20050630 |
| IN 2008KN02347 | A | 20090123 | IN 2008-KN2347 | 20080611 |
| PRIORITY APPLN. INFO.: | | | US 2002-437519P | P 20021231 |
| | | | US 2003-517042P | P 20031103 |
| | | | WO 2003-US41545 | W 20031231 |
| | | | IN 2005-KN1264 | A3 20050629 |

AB The present invention relates to stable, extended release crystals of human growth hormone (hGH) or a human growth hormone derivative and compns. or formulations comprising such crystals. The invention further provides methods for producing those crystals and compns. The invention further provides methods for treatment of an individual having disorders associated with human growth hormone deficiency or which are ameliorated by treatment with human growth hormone using those crystals and compns. or formulations. For example, crystallization of hGH with calcium acetate, PEG-6000

and protamine sulfate was carried out. Com. available hGH was purified and concentrated, and deionized water was added to the concentrated hGH solution to yield

a final protein concentration of 15 mg/mL. Tris-HCl (1 M, pH 8.6) was added to a

final concentration of 100 mM. To this solution, protamine sulfate (1 mg/mL) and 6%

PEG-6000 (volume/volume) was added. Crystals of hGH were grown by adding calcium acetate (1 M) to the solution so that a final concentration of 85 mM calcium

acetate was obtained. The solution was then incubated for 16 h at 37°. Needle-like crystals obtained were found to be less than 25 µm in length with a crystallization yield of > 70%.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 21 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:955600 CAPLUS

DOCUMENT NUMBER: 142:204674

TITLE: Biodegradable pharmaceutical composition enabling sustained release of human growth hormone and microsphere thereof

INVENTOR(S): Cho, Yeong U.; Kim, Hong Gi; Kim, Won Bae; Lee, Geon Il; Lee, Seong Hui; Park, Tae Gwan; Park, Yong Man

PATENT ASSIGNEE(S): Dong-A Pharm. Co., Ltd., S. Korea; Korea Advanced Institute of Science and Technology

SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given
CODEN: KRXXA7

DOCUMENT TYPE: Patent

LANGUAGE: Korean

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| KR 2003006455 | A | 20030123 | KR 2001-42196 | 20010713 |
| KR 838219 | B1 | 20080613 | | |

PRIORITY APPLN. INFO.: KR 2001-42196 20010713

AB A microsphere containing a drug obtained by adding polyethylene glycol as a protein stabilizer in an appropriate ratio and then including human growth hormone into the microsphere is provided which enables the human growth hormone to continuously release from the microsphere for two weeks even in vivo as well as in vitro. The microspherical composition contains human growth hormone, polyethylene glycol or a derivative thereof as a protein stabilizer, a biodegradable polyester polymer as a polymer carrier, a surfactant and an emulsifier, wherein the human growth hormone and polyethylene glycol or a mixture thereof are dispersed in a droplet of the surfactant to form a first emulsion. The first emulsion is dispersed in the droplet of the emulsion.

L3 ANSWER 22 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:171688 CAPLUS

DOCUMENT NUMBER: 136:221723

TITLE: Sustained release formulations for growth hormone secretagogues

INVENTOR(S): Am Ende, Mary Tanya; Curatolo, William John; Herbig, Scott Max

PATENT ASSIGNEE(S): Pfizer Products Inc., USA

SOURCE: PCT Int. Appl., 137 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
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|------------------------|--|----------|-----------------|-------------|
| ----- | ----- | ----- | ----- | ----- |
| WO 2002017918 | A2 | 20020307 | WO 2001-IB1429 | 20010808 |
| WO 2002017918 | A3 | 20020725 | | |
| W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | |
| CA 2420535 | A1 | 20020307 | CA 2001-2420535 | 20010808 |
| AU 2001076608 | A | 20020313 | AU 2001-76608 | 20010808 |
| EP 1313473 | A2 | 20030528 | EP 2001-954267 | 20010808 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | |
| BR 2001013626 | A | 20030617 | BR 2001-13626 | 20010808 |
| JP 2004507502 | T | 20040311 | JP 2002-522891 | 20010808 |
| US 20020137765 | A1 | 20020926 | US 2001-940097 | 20010827 |
| US 6641840 | B2 | 20031104 | | |
| MX 2003001771 | A | 20030604 | MX 2003-1771 | 20030227 |
| US 20040091530 | A1 | 20040513 | US 2003-611586 | 20030630 |
| PRIORITY APPLN. INFO.: | | | US 2000-229074P | P 20000830 |
| | | | WO 2001-IB1429 | W 20010808 |
| | | | US 2001-940097 | A3 20010827 |

AB The present invention relates to formulations for administering a growth hormone secretagogue. More specifically, the present invention relates to sustained release formulations for administering a growth hormone secretagogue and formulations for administering a growth hormone secretagogue that provide for a part of the dose of the growth hormone secretagogue to be administered using an immediate release formulation and part of the dose of the growth hormone secretagogue to be administered using a sustained release formulation. Thus, a sustained release dosage form for oral administration contained 2-amino-N-[2-(3a-(R)-benzyl-2-methyl-3-oxo-2,3,3a,4,6,7-hexahydropyrazolo[4,3-c]pyridin-5-yl)-1-(R)-benzyloxymethyl-2-oxoethyl]isobutyramide L-tartrate 3.89, mannitol 34.00, fumaric acid 12.00, microcryst. cellulose 48.61, Mg stearate 1.50, cellulose acetate 11.90, and PEG 5.10 mg/tablet.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 23 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2002:869417 CAPLUS
 DOCUMENT NUMBER: 137:358174
 TITLE: Optimization of the molecular properties and formulation of proteins delivered by inhalation by pegylation or glycosylation
 INVENTOR(S): Gonda, Igor
 PATENT ASSIGNEE(S): Australia
 SOURCE: U.S. Pat. Appl. Publ., 6 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----------------|-------|----------|-----------------|----------|
| ----- | ----- | ----- | ----- | ----- |
| US 20020168323 | A1 | 20021114 | US 2002-146549 | 20020513 |
| CA 2445494 | A1 | 20021121 | CA 2002-2445494 | 20020513 |

WO 2002092147 A2 20021121 WO 2002-US15429 20020513
 WO 2002092147 A3 20031127
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
 UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,
 GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA,
 GN, GQ, GW, ML, MR, NE, SN, TD, TG
 AU 2002309848 A1 20021125 AU 2002-309848 20020513
 EP 1392350 A2 20040303 EP 2002-736873 20020513
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
 JP 2004531550 T 20041014 JP 2002-589063 20020513
 PRIORITY APPLN. INFO.: US 2001-290292P P 20010511
 WO 2002-US15429 W 20020513

AB Pegylation or glycosylation of therapeutic proteins enhances at least one of the solubility, stability and bioavailability, for delivery of an effective amount in an aerosol delivery to the lungs using a minimal number of puffs. E.g., the optimum pegylated derivative of recombinant human growth hormone is one that can be delivered in the min. number of breaths from a system such as AERx or RespiMAT.

L3 ANSWER 24 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:713164 CAPLUS
 DOCUMENT NUMBER: 135:262256
 TITLE: A somatotropin composition with improved syringeability
 INVENTOR(S): Kim, Nam Joong; Ryoo, Je Phil
 PATENT ASSIGNEE(S): Lg Chemical Ltd., S. Korea
 SOURCE: PCT Int. Appl., 36 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|------------|
| WO 2001070256 | A1 | 20010927 | WO 2000-KR1151 | 20001016 |
| W: AU, BR, CA, MX, US, ZA | | | | |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| KR 2001089862 | A | 20011012 | KR 2000-15091 | 20000324 |
| CA 2374043 | A1 | 20010927 | CA 2000-2374043 | 20001016 |
| BR 2000010947 | A | 20020312 | BR 2000-10947 | 20001016 |
| EP 1194160 | A1 | 20020410 | EP 2000-970270 | 20001016 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| AU 783240 | B2 | 20051006 | AU 2000-79671 | 20001016 |
| EG 24204 | A | 20081020 | EG 2001-295 | 20010324 |
| MX 2001011719 | A | 20030910 | MX 2001-11719 | 20011114 |
| US 6733786 | B1 | 20040511 | US 2001-926590 | 20011121 |
| PRIORITY APPLN. INFO.: | | | KR 2000-15091 | A 20000324 |
| | | | WO 2000-KR1151 | W 20001016 |

AB An improved composition consists of somatotropin with activity in vivo, a lipid-soluble vitamin and at least 1 lubricant. This improves the poor syringeability under cold temps. of the conventional somatotropin formulation. Thus, bovine somatotropin solution was lyophilized and the

powder obtained was mixed with vitamin E acetate and benzyl alc. The above composition was filled in a polypropylene syringe and the sample was stored at ambient temperature and 4°.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 25 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:843144 CAPLUS

DOCUMENT NUMBER: 142:11539

TITLE: Sustained releasing composition comprising somatotropin

INVENTOR(S): Kim, Nam Joong; Joh, Heung Soo; Lee, Byung Kum

PATENT ASSIGNEE(S): LG Chemical Co., Ltd., S. Korea

SOURCE: Repub. Korea, No pp. given

CODEN: KRXXFC

DOCUMENT TYPE: Patent

LANGUAGE: Korean

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|---|----------|-----------------|----------|
| KR 143767 | B1 | 19980715 | KR 1991-24288 | 19911224 |
| PRIORITY APPLN. INFO.: | | | KR 1991-24288 | 19911224 |
| AB | An implantable formula containing somatotropin is provided for sustained release of somatotropin that promotes animal's growth. A process for the preparation of sustained releasing formula containing somatotropin comprises of: | | | |
| | mixing polyethylene glycol, the water-soluble polymer with somatotropin or liposome bovine somatotropin; adding some water and mixing; granulation; coating granulated compound by spraying hydroxy Pr cellulose dissolved in ethanol using spray gun; making tablet or pellet by tablet machine. | | | |

L3 ANSWER 26 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1995:958515 CAPLUS

DOCUMENT NUMBER: 123:350357

ORIGINAL REFERENCE NO.: 123:62653a,62656a

TITLE: Wound healing compositions containing cell culture medium and growth hormones

INVENTOR(S): Lindenbaum, Ella

PATENT ASSIGNEE(S): Life Medical Science, Inc., USA

SOURCE: U.S., 9 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|-----------------|-------------|
| US 5461030 | A | 19951024 | US 1993-158808 | 19931129 |
| US 5591709 | A | 19970107 | US 1995-374944 | 19950118 |
| PRIORITY APPLN. INFO.: | | | IL 1991-97127 | A 19910201 |
| | | | US 1991-752849 | B1 19910830 |
| | | | US 1992-937486 | B2 19920828 |
| | | | US 1993-25216 | B2 19930302 |
| | | | US 1993-158808 | A2 19931129 |
| AB | The title formulations are useful for treating wounds by accelerating wound healing. These formulations comprise an effective amount of a serum free cellular nutrient medium in combination with an effective amount of at least one cellular growth stimulating compound, e.g. a natural anabolic hormone or transforming growth factor. Thus, 100 g of lyophilized powder | | | |

of MCDB 153 culture medium was reconstituted with water and supplemented with human growth hormone to final concentration of 0.5-2 ng/mL. In certain formulations insulin-transferrin was added to final concentration of 5µg/mL and collagen or gelatin at 4% concentration. The compns. were effective in treatment of pressure wound and skin ulcers.

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 27 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1994:307496 CAPLUS
DOCUMENT NUMBER: 120:307496
ORIGINAL REFERENCE NO.: 120:53945a, 53948a
TITLE: Sustained-release protein formulations with PEG and triacetin
INVENTOR(S): Hageman, Michael J.
PATENT ASSIGNEE(S): Upjohn Co., USA
SOURCE: PCT Int. Appl., 17 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|-------------|
| WO 9406452 | A1 | 19940331 | WO 1993-US7756 | 19930823 |
| W: AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, VN | | | | |
| RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| AU 9350186 | A | 19940412 | AU 1993-50186 | 19930823 |
| EP 661989 | A1 | 19950712 | EP 1993-920157 | 19930823 |
| EP 661989 | B1 | 19970806 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | | |
| JP 08501305 | T | 19960213 | JP 1994-508083 | 19930823 |
| JP 3756512 | B2 | 20060315 | | |
| AT 156361 | T | 19970815 | AT 1993-920157 | 19930823 |
| ES 2107051 | T3 | 19971116 | ES 1993-920157 | 19930823 |
| ZA 9306415 | A | 19950228 | ZA 1993-6415 | 19930831 |
| US 6011011 | A | 20000104 | US 1995-407327 | 19950320 |
| JP 2004285079 | A | 20041014 | JP 2004-206098 | 20040713 |
| PRIORITY APPLN. INFO.: | | | US 1992-947872 | A2 19920921 |
| | | | US 1992-963365 | A2 19921020 |
| | | | JP 1994-508083 | A3 19930823 |
| | | | WO 1993-US7756 | W 19930823 |

AB Novel sustained-release injections of a protein or peptide, e.g. somatotropin (I) and growth hormone releasing factor, are prepared using triacetin or PEG. Thus, 25.01 g triacetin was mixed with 6.85 g bovine somatotropin to obtain a suspension containing 200mg I/mL. Cows were injected s.c. with 0.7mL of the suspension containing 150 mg I. The greatest quantity of I appeared in the serum 12-30 h post injection and remained elevated for .apprx.84 hs.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 28 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1994:638406 CAPLUS
DOCUMENT NUMBER: 121:238406
ORIGINAL REFERENCE NO.: 121:43325a, 43328a
TITLE: Implantable composition for the controlled release of somatotropin

INVENTOR(S): Kin, Nam Joong; Cho, Heung Soo; Sorig, Maeng Seok;
 Choi, Yun Jeong; Rhee, Byung Geon
 PATENT ASSIGNEE(S): Lucky Ltd., S. Korea
 SOURCE: Braz. Pedido PI, 33 pp.
 CODEN: BPXXDX
 DOCUMENT TYPE: Patent
 LANGUAGE: Portuguese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|----------|
| BR 9305261 | A | 19940705 | BR 1993-5261 | 19931228 |
| AU 9352718 | A | 19940707 | AU 1993-52718 | 19931223 |
| AU 660119 | B2 | 19950608 | | |
| CN 1093597 | A | 19941019 | CN 1993-121466 | 19931228 |
| US 5662917 | A | 19970902 | US 1996-601275 | 19960322 |

PRIORITY APPLN. INFO.: KR 1992-25904 A 19921228
 US 1993-171533 B1 19931222

AB The implantable composition claimed involves somatotropin, a biocompatible wax and a water-soluble polymer. Thus, 5 g lyophilized porcine somatotropin powder is mixed with 10 g polyethylene glycol (mol. weight 35,000) and 10 g paraffin wax, and the mixture is homogenized and formed into tablets measuring 7 mm in diameter and 6.2 mm in thickness. Each tablet contains 250 mg of the homogenized mixture. The product allows for prolonged release of somatotropin with few side effects.

L3 ANSWER 29 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1993:456164 CAPLUS
 DOCUMENT NUMBER: 119:56164
 ORIGINAL REFERENCE NO.: 119:9997a,10000a
 TITLE: Oral compositions of proteinaceous medicaments
 INVENTOR(S): Desai, Ashok J.
 PATENT ASSIGNEE(S): Applied Analytical Industries, Inc., USA
 SOURCE: U.S., 8 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|----------|
| US 5206219 | A | 19930427 | US 1991-797221 | 19911125 |

PRIORITY APPLN. INFO.: US 1991-797221 19911125

AB Proteinaceous medicaments (e.g. erythropoietin, insulin, calcitonin) are formulated in a medium containing a polyol pharmaceutical solvent combined as cosolvent with a lipid pharmaceutical solvent. The formulation is adapted for oral administration as a liquid as well as a filled hard or soft gelatin capsule. The preferred polyol solvent is PEG/propylene glycol, and the preferred lipid solvent is oleic acid. A capsule formulation contained (per capsule) insulin 140 IU, dimyristyl phosphatidylcholine 0.047, aprotinin 3.39, hydroxypropyl cellulose-LF 3.76, poly-oxy 40 stearate 3.76, PEG 400 139.8, propylene glycol 15.57, water/citrate buffer (pH adjustment) 8.75, cholesterol 31.2, Tween-80 17.56, egg yolk lecithin 63.1, glyceryl monooleate 27.9, d- α -tocopherol 19.6, and oleic acid 249.1 mg.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 30 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1993:656548 CAPLUS

DOCUMENT NUMBER: 119:256548
ORIGINAL REFERENCE NO.: 119:45649a, 45652a
TITLE: Injection formulations containing therapeutic peptides and hormones
INVENTOR(S): Igari, Yasutaka; Yamada, Minoru; Ishiguro, Kyoko
PATENT ASSIGNEE(S): Takeda Chemical Industries Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-------------|------|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| JP 05238949 | A | 19930917 | JP 1992-334281 | 19921215 |
| JP 3730667 | B2 | 20060105 | | |

PRIORITY APPLN. INFO.: JP 1991-347352 A1 19911227

AB A long-lasting peptide injection composition consists of (1) a water-soluble peptide with the body clearance rate ≥ 30 mL/h·kg body weight in the rat, (2) an waxlike polyethylene glycol (average mol. weight 2000-6000), and optional nontherapeutic soluble proteins, and acidic mucopolysaccharides. Thus, 10 mg pig insulin (26.8 units/mg) with the clearance rate 1416 mL/h·kg was dissolved in 5 mL 0.1 N HCl. This solution (0.7 mL) was mixed with 0.7 mL saline containing 4.2 mg polyethylene glycol (average mol. weight 2000) to give an injection composition

L3 ANSWER 31 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1993:60783 CAPLUS
DOCUMENT NUMBER: 118:60783
ORIGINAL REFERENCE NO.: 118:10905a, 10908a
TITLE: Improved high-impact, antistatic, rubber-modified styrene polymer compositions
INVENTOR(S): Fukuoka, Mamoru; Yoneda, Ryoichi; Yanagisawa, Mitsugi; Kamikura, Masao
PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-------------|------|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| JP 04168138 | A | 19920616 | JP 1990-291921 | 19901031 |

PRIORITY APPLN. INFO.: JP 1990-291921 19901031

AB The title compns. useful for molding into articles such as housing for elec. appliance, toys, etc. with persistent antistatic properties, are formulated from (A) copolymers derived from styrene-type monomers, unsatd. carboxylic acids, and other comonomers, (B) hydrogenated block polymers containing styrene-type blocks and conjugated diene-type blocks, (C) polyalkylene oxides or their derivs., (D) styrene polymers modified by butadiene rubbers having high degree of cis-1,4-configuration, and (E) antistatic additives. A typical title composition comprised, as A, the emulsion-polymerized styrene-methacrylic acid copolymer 20, as B, Tuftex M-1913 6, as C, a polyethylene glycol 10, as D, Dic Styrene GH-9650 74, and as E, Duspar 802D (alkylsulfonate salt antistatic agent) 2 parts.

L3 ANSWER 32 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1988:58404 CAPLUS
 DOCUMENT NUMBER: 108:58404
 ORIGINAL REFERENCE NO.: 108:9733a,9736a
 TITLE: Toilet-cleaning compositions containing polyethylene glycols and ethylene oxide-propylene oxide copolymers
 INVENTOR(S): Kunimura, Etsuo
 PATENT ASSIGNEE(S): Takasago Perfumery Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 62197494 | A | 19870901 | JP 1986-38166 | 19860225 |
| PRIORITY APPLN. INFO.: | | | JP 1986-38166 | 19860225 |

AB The title compns. show minimal changes in viscosity with temperature during summer. Polyethylene glycol (mol. weight 3000-4000, solidification point 53-56°) 63, ethylene oxide-propylene oxide copolymer (Adeka Carpol GH-10) 20, polyethylene glycol (mol. weight 7000-9000, solidification point 58-63°) 8, blue dye 4, and perfume 5% were blended under heat (from 80° to 60°), added to a container at 53°, and cooled to give a waxlike cleaning composition

L3 ANSWER 33 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1985:472745 CAPLUS
 DOCUMENT NUMBER: 103:72745
 ORIGINAL REFERENCE NO.: 103:11713a,11716a
 TITLE: Water-based ink compositions for ball point pens
 PATENT ASSIGNEE(S): Pilot Ink Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 60047082 | A | 19850314 | JP 1983-155297 | 19830825 |
| PRIORITY APPLN. INFO.: | | | JP 1983-155297 | 19830825 |

AB The title compns., which afford good lubrication and give good lines even in high-speed writing, contain a dye, water, and ≥ 1 compound $R_1CO_2(CH_2CH_2O)_nR$ (R = H, OCR₂; R₁, R₂ = C₁₁-20 alkyl, alkenyl; n = 3-24). Thus, Acid Phloxine (C.I. 45410) [18472-87-2] 2, Eosine GH (C.I. 45380) [17372-87-1] 3.5, propylene glycol 10, thiodiethylene glycol 10, poly(vinyl alc.) 0.3, phenol 0.4, polyethylene glycol monostearate [9004-99-3] (I) 1, and water 72.8 parts were mixed to prepare a red ink, which afforded good writing lines at high speed compared with inferior properties for an ink composition without I.

L3 ANSWER 34 OF 34 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1977:541296 CAPLUS
 DOCUMENT NUMBER: 87:141296
 ORIGINAL REFERENCE NO.: 87:22283a,22286a
 TITLE: Long-acting somatostatin composition
 INVENTOR(S): Fenichel, Richard L.; Levin, Howard J.
 PATENT ASSIGNEE(S): American Home Products Corp., USA
 SOURCE: U.S., 3 pp.

CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| US 4041155 | A | 19770809 | US 1974-518650 | 19741029 |
| PRIORITY APPLN. INFO.: | | | US 1974-518650 | 19741029 |

AB Growth-hormone-release-inhibiting compns.
with prolonged action containing Somatostatin [38916-34-6] (a cyclic disulfide tetradecapeptide) or a linear somatostatin (the reduced tetradecapeptide) are prepared by dissolving the drug in water, followed by adding sufficient polyethylene glycol 400 [25322-68-3] or polyethylene glycol 300 to make .apprx.80% of the composition Thus, a formulation containing 500 mg of the cyclic tetradecapeptide/mL was prepared by dissolving 500 mg of it in 0.2 mL water and adding, with stirring, 0.8 mL polyethylene glycol 400. The prolongation of the inhibition of growth hormone release by the formulation was demonstrated when it was injected s.c. into rats.

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STN INTERNATIONAL SESSION SUSPENDED AT 09:46:47 ON 14 JUL 2009